



#5

1

SEQUENCE LISTING

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<110> CIHLAR, TOMAS

<120> NOVEL GENE ENCODING ORGANIC ANION TRANSPORTER

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<140> 10/086,816

<141> 2002-02-28

<150> 09/330,245

<151> 1999-06-10

<150> 60/132,267

<151> 1999-05-03

<150> 60/088,864

<151> 1998-06-11

<160> 10

<170> PatentIn Ver. 2.1

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<222> (263)..(1912)

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ggactcagct cccgggaagc aaccagctg cggaggcaac ggcagtgtg ctctccagc 180
gaaggacagc aggcaggcag acagacagag gtcctgggac tggaaggcct cagccccag 240
ccactgggct gggcctggcc ca atg gcc ttt aat gac ctc ctg cag cag gtg 292
Met Ala Phe Asn Asp Leu Leu Gln Gln Val
1 5 10
ggg ggt gtc ggc cgc ttc cag cag atc cag gtc acc ctg gtg gtc ctc 340
Gly Gly Val Gly Arg Phe Gln Gln Ile Gln Val Thr Leu Val Val Leu
15 20 25
ccc ctg ctc ctg atg gct tct cac aac acc ctg cag aac ttc act gct 388
Pro Leu Leu Leu Met Ala Ser His Asn Thr Leu Gln Asn Phe Thr Ala
30 35 40
gcc atc cct acc cac cac tgc cgc ccg cct gcc gat gcc aac ctc agc 436
Ala Ile Pro Thr His His Cys Arg Pro Pro Ala Asp Ala Asn Leu Ser
45 50 55
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| aag aac ggg ggg ctg gag gtc tgg ctg ccc cgg gac agg cag ggg cag | 484 |
| Lys Asn Gly Gly Leu Glu Val Trp Leu Pro Arg Asp Arg Gln Gly Gln | |
| 60 65 70 | |
| cct gag tcc tgc ctc cgc ttc acc tcc ccg cag tgg gga ctg ccc ttt | 532 |
| Pro Glu Ser Cys Leu Arg Phe Thr Ser Pro Gln Trp Gly Leu Pro Phe | |
| 75 80 85 90 | |
| ctc aat ggc aca gaa gcc aat ggc aca ggg gcc aca gag ccc tgc acc | 580 |
| Leu Asn Gly Thr Glu Ala Asn Gly Thr Gly Ala Thr Glu Pro Cys Thr | |
| 95 100 105 | |
| gat ggc tgg atc tat gac aac agc acc ttc cca tct acc atc gtg act | 628 |
| Asp Gly Trp Ile Tyr Asp Asn Ser Thr Phe Pro Ser Thr Ile Val Thr | |
| 110 115 120 | |
| gag tgg gac ctt gtg tgc tct cac agg gcc cta cgc cag ctg gcc cag | 676 |
| Glu Trp Asp Leu Val Cys Ser His Arg Ala Leu Arg Gln Leu Ala Gln | |
| 125 130 135 | |
| tcc ttg tac atg gtg ggg gtg ctg ctc gga gcc atg gtg ttc ggc tac | 724 |
| Ser Leu Tyr Met Val Gly Val Leu Leu Gly Ala Met Val Phe Gly Tyr | |
| 140 145 150 | |
| ctt gca gac agg cta ggc cgc cgg aag gta ctc atc ttg aac tac ctg | 772 |
| Leu Ala Asp Arg Leu Gly Arg Arg Lys Val Leu Ile Leu Asn Tyr Leu | |
| 155 160 165 170 | |
| cag aca gct gtg tca ggg acc tgc gca gcc ttc gca ccc aac ttc ccc | 820 |
| Gln Thr Ala Val Ser Gly Thr Cys Ala Ala Phe Ala Pro Asn Phe Pro | |
| 175 180 185 | |
| atc tac tgc gcc ttc cgg ctc ctc tcg ggc atg gct ctg gct ggc atc | 868 |
| Ile Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ala Leu Ala Gly Ile | |
| 190 195 200 | |
| tcc ctc aac tgc atg aca ctg aat gtg gag tgg atg ccc att cac aca | 916 |
| Ser Leu Asn Cys Met Thr Leu Asn Val Glu Trp Met Pro Ile His Thr | |
| 205 210 215 | |
| cgg gcc tgc gtg ggc acc ttg att ggc tat gtc tac agc ctg ggc cag | 964 |
| Arg Ala Cys Val Gly Thr Leu Ile Gly Tyr Val Tyr Ser Leu Gly Gln | |
| 220 225 230 | |
| ttc ctc ctg gct ggt gtg gcc tac gct gtg ccc cac tgg cgc cac ctg | 1012 |
| Phe Leu Leu Ala Gly Val Ala Tyr Ala Val Pro His Trp Arg His Leu | |
| 235 240 245 250 | |
| cag cta ctg gtc tct gcg cct ttt ttt gcc ttc ttc atc tac tcc tgg | 1060 |
| Gln Leu Leu Val Ser Ala Pro Phe Phe Ala Phe Phe Ile Tyr Ser Trp | |
| 255 260 265 | |
| ttc ttc att gag tcg gcc cgc tgg cac tcc tcc tcc ggg agg ctg gac | 1108 |
| Phe Phe Ile Glu Ser Ala Arg Trp His Ser Ser Ser Gly Arg Leu Asp | |
| 270 275 280 | |

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| ctc acc ctg agg gcc ctg cag aga gtc gcc cgg atc aat ggg aag cgg | 1156 |
| Leu Thr Leu Arg Ala Leu Gln Arg Val Ala Arg Ile Asn Gly Lys Arg | |
| 285 290 295 | |
| gaa gaa gga gcc aaa ttg agt atg gag gta ctc cgg gcc agt ctg cag | 1204 |
| Glu Glu Gly Ala Lys Leu Ser Met Glu Val Leu Arg Ala Ser Leu Gln | |
| 300 305 310 | |
| aag gag ctg acc atg ggc aaa ggc cag gca tgc gcc atg gag ctg ctg | 1252 |
| Lys Glu Leu Thr Met Gly Lys Gly Gln Ala Ser Ala Met Glu Leu Leu | |
| 315 320 325 330 | |
| cgc tgc ccc acc ctc cgc cac ctc ttc ctc tgc ctc tcc atg ctg tgg | 1300 |
| Arg Cys Pro Thr Leu Arg His Leu Phe Leu Cys Leu Ser Met Leu Trp | |
| 335 340 345 | |
| ttt gcc act agc ttt gca tac tat ggg ctg gtc atg gac ctg cag ggc | 1348 |
| Phe Ala Thr Ser Phe Ala Tyr Tyr Gly Leu Val Met Asp Leu Gln Gly | |
| 350 355 360 | |
| ttt gga gtc agc atc tac cta atc cag gtg atc ttt ggt gct gtg gac | 1396 |
| Phe Gly Val Ser Ile Tyr Leu Ile Gln Val Ile Phe Gly Ala Val Asp | |
| 365 370 375 | |
| ctg cct gcc aag ctt gtg ggc ttc ctt gtc atc aac tcc ctg ggt cgc | 1444 |
| Leu Pro Ala Lys Leu Val Gly Phe Leu Val Ile Asn Ser Leu Gly Arg | |
| 380 385 390 | |
| cgg cct gcc cag atg gct gca ctg ctg ctg gca ggc atc tgc atc ctg | 1492 |
| Arg Pro Ala Gln Met Ala Ala Leu Leu Leu Ala Gly Ile Cys Ile Leu | |
| 395 400 405 410 | |
| ctc aat ggg gtg ata ccc cag gac cag tcc att gtc cga acc tct ctt | 1540 |
| Leu Asn Gly Val Ile Pro Gln Asp Gln Ser Ile Val Arg Thr Ser Leu | |
| 415 420 425 | |
| gct gtg ctg ggg aag ggt tgt ctg gct gcc tcc ttc aac tgc atc ttc | 1588 |
| Ala Val Leu Gly Lys Gly Cys Leu Ala Ala Ser Phe Asn Cys Ile Phe | |
| 430 435 440 | |
| ctg tat act ggg gaa ctg tat ccc aca atg atc cgg cag aca ggc atg | 1636 |
| Leu Tyr Thr Gly Glu Leu Tyr Pro Thr Met Ile Arg Gln Thr Gly Met | |
| 445 450 455 | |
| gga atg ggc agc acc atg gcc cga gtg ggc agc atc gtg agc cca ctg | 1684 |
| Gly Met Gly Ser Thr Met Ala Arg Val Gly Ser Ile Val Ser Pro Leu | |
| 460 465 470 | |
| gtg agc atg act gcc gag ctc tac ccc tcc atg cct ctc ttc atc tac | 1732 |
| Val Ser Met Thr Ala Glu Leu Tyr Pro Ser Met Pro Leu Phe Ile Tyr | |
| 475 480 485 490 | |
| ggg gct gtt cct gtg gcc gcc agc gct gtc act gtc ctc ctg cca gag | 1780 |
| Gly Ala Val Pro Val Ala Ala Ser Ala Val Thr Val Leu Leu Pro Glu | |
| 495 500 505 | |

acc ctg ggc cag cca ctg cca gac acg gtg cag gac ctg gag agc agg 1828
 Thr Leu Gly Gln Pro Leu Pro Asp Thr Val Gln Asp Leu Glu Ser Arg
 510 515 520

aaa ggg aaa cag acg cga cag caa caa gag cac cag aag tat atg gtc 1876
 Lys Gly Lys Gln Thr Arg Gln Gln Gln Glu His Gln Lys Tyr Met Val
 525 530 535

cca ctg cag gcc tca gca caa gag aag aat gga ctc tgaggactga 1922
 Pro Leu Gln Ala Ser Ala Gln Glu Lys Asn Gly Leu
 540 545 550

gaaggggcct tacagaaccc taaagggagg gaaggtccta caggtctccg gccacccaca 1982

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Ser His Asn Thr Leu Gln Asn Phe Thr Ala Ala Ile Pro Thr His His
 35 40 45

Cys Arg Pro Pro Ala Asp Ala Asn Leu Ser Lys Asn Gly Gly Leu Glu
 50 55 60

Val Trp Leu Pro Arg Asp Arg Gln Gly Gln Pro Glu Ser Cys Leu Arg
 65 70 75 80

Phe Thr Ser Pro Gln Trp Gly Leu Pro Phe Leu Asn Gly Thr Glu Ala
 85 90 95

Asn Gly Thr Gly Ala Thr Glu Pro Cys Thr Asp Gly Trp Ile Tyr Asp
 100 105 110

Asn Ser Thr Phe Pro Ser Thr Ile Val Thr Glu Trp Asp Leu Val Cys
 115 120 125

Ser His Arg Ala Leu Arg Gln Leu Ala Gln Ser Leu Tyr Met Val Gly
 130 135 140

Val Leu Leu Gly Ala Met Val Phe Gly Tyr Leu Ala Asp Arg Leu Gly
 145 150 155 160

Arg Arg Lys Val Leu Ile Leu Asn Tyr Leu Gln Thr Ala Val Ser Gly
 165 170 175
 Thr Cys Ala Ala Phe Ala Pro Asn Phe Pro Ile Tyr Cys Ala Phe Arg
 180 185 190
 Leu Leu Ser Gly Met Ala Leu Ala Gly Ile Ser Leu Asn Cys Met Thr
 195 200 205
 Leu Asn Val Glu Trp Met Pro Ile His Thr Arg Ala Cys Val Gly Thr
 210 215 220
 Leu Ile Gly Tyr Val Tyr Ser Leu Gly Gln Phe Leu Leu Ala Gly Val
 225 230 235 240
 Ala Tyr Ala Val Pro His Trp Arg His Leu Gln Leu Leu Val Ser Ala
 245 250 255
 Pro Phe Phe Ala Phe Phe Ile Tyr Ser Trp Phe Phe Ile Glu Ser Ala
 260 265 270
 Arg Trp His Ser Ser Ser Gly Arg Leu Asp Leu Thr Leu Arg Ala Leu
 275 280 285
 Gln Arg Val Ala Arg Ile Asn Gly Lys Arg Glu Glu Gly Ala Lys Leu
 290 295 300
 Ser Met Glu Val Leu Arg Ala Ser Leu Gln Lys Glu Leu Thr Met Gly
 305 310 315 320
 Lys Gly Gln Ala Ser Ala Met Glu Leu Leu Arg Cys Pro Thr Leu Arg
 325 330 335
 His Leu Phe Leu Cys Leu Ser Met Leu Trp Phe Ala Thr Ser Phe Ala
 340 345 350
 Tyr Tyr Gly Leu Val Met Asp Leu Gln Gly Phe Gly Val Ser Ile Tyr
 355 360 365
 Leu Ile Gln Val Ile Phe Gly Ala Val Asp Leu Pro Ala Lys Leu Val
 370 375 380
 Gly Phe Leu Val Ile Asn Ser Leu Gly Arg Arg Pro Ala Gln Met Ala
 385 390 395 400
 Ala Leu Leu Leu Ala Gly Ile Cys Ile Leu Leu Asn Gly Val Ile Pro
 405 410 415
 Gln Asp Gln Ser Ile Val Arg Thr Ser Leu Ala Val Leu Gly Lys Gly
 420 425 430
 Cys Leu Ala Ala Ser Phe Asn Cys Ile Phe Leu Tyr Thr Gly Glu Leu
 435 440 445
 Tyr Pro Thr Met Ile Arg Gln Thr Gly Met Gly Met Gly Ser Thr Met
 450 455 460

Ala Arg Val Gly Ser Ile Val Ser Pro Leu Val Ser Met Thr Ala Glu
465 470 475 480

Leu Tyr Pro Ser Met Pro Leu Phe Ile Tyr Gly Ala Val Pro Val Ala
485 490 495

Ala Ser Ala Val Thr Val Leu Leu Pro Glu Thr Leu Gly Gln Pro Leu
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Pro Asp Thr Val Gln Asp Leu Glu Ser Arg Lys Gly Lys Gln Thr Arg
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Gln Gln Gln Glu His Gln Lys Tyr Met Val Pro Leu Gln Ala Ser Ala
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29

<210> 10
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